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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,946	03/31/2000	Carl M. Ellison	042390.P8104	3228

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EXAMINER

HENEGHAN, MATTHEW E

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/540,946

Applicant(s)

ELLISON ET AL.

Examiner

Matthew Heneghan

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-14.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-48 have been examined.

Information Disclosure Statement

2. The following Information Disclosure Statements in the instant application have been fully considered, except as noted below:

Paper No. 5, filed 26 December 2000.

Paper No. 6, filed 10 September 2001.

Paper No. 7, filed 9 April 2002.

Paper No. 8, filed 18 June 2002.

Paper No. 9, filed 22 November 2002.

Paper No. 10, filed 25 April 2003.

Paper No. 11, filed 29 April 2003.

Paper No. 12, filed 22 August 2003.

Paper No. 13, filed 20 August 2003.

Paper No. 14, filed 17 December 2003.

3. The eleventh and nineteenth items in Paper No. 6, U.S. Patent No. 5,796,845 to Serikawa et al. and U.S. Patent No. 6,158,546 to Hanson et al., respectively, may not be relevant to the instant application. The references have nonetheless been considered.

The first foreign patent document in Paper No. 7 (EP 0600112) is not in English and has not been considered.

The sixth item in Paper No. 14 (Richt et al.) is not in English and has not been considered.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(g) because the margins are out of specification in figures 2-7. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(1) because some of the reference characters are illegible in figure 7. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because the specification gives two different descriptions for item "10" on p. 9, lines 5 and 6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: item 307 on p. 22, line 22. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: figure 1C, item 135; figure 3A, items 395, 396, 397, and 398; figure 3B, item 365; figure 3D, item 357; figure 3E, item 341; and figure 7, items 706, 707, and 708. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

9. The use of the trademark Windows has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

10. Claims 8 and 44 are objected to because of the following informalities: Each recites a "potion" in line 3. It is being presumed that this reference is to a "portion." Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 10, 22, 34, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each claim cites the use of products without noting their trademarks.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-48 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,421,006 to Jablon et al.

As per claims 1, 2, 4, 7, 13, 14, 16, 19, 25, 26, 28, 31, 37, 38, 40, and 43, the system integrity scheme disclosed by Jablon includes the generation of a private key (using encryption) for each program level, including parts of the operating system, for protecting a subset of the operating system's environment (see column 16, lines 36-44 and column 19, lines 28-44). Each level's private key is based upon the level's MDC (which is unique) and the public key of a trusted authority (the BK0) and stored and retrieved as a signature.

As per claims 3, 15, 27, and 39, Jablon discloses that the MDC may be a hash value (see column 5, lines 44-47).

As per claims 5, 17, 29, and 41, a second hash is computed and compared to the original for verification (see column 19, lines 39-44).

As per claims 6, 18, 30, and 42, a layer of the OS, the login file may be stored encrypted, and decrypted for verification (see column 22, lines 47-56).

As per claims 8, 20, 32, and 44, a list of programs (the manifest) may be kept, with all the above-mentioned integrity information (see column 17, line 48 to column 18, line 24).

As per claims 9, 21, 33, and 45, the invention uses a latch to protect the system from untrusted software (isolated execution) (see abstract).

Regarding claims 10, 22, 34, and 46, Jablon discloses the use of DOS on a PC, and notes that the invention may be used with many other operating systems (see column 10, lines 18-24). Windows 3.1, NT 3.51, and Windows 95 run atop DOS, and therefore are encompassed by the invention.

Regarding claims 11, 23, 35, and 47, the list of programs encompasses all of the programs running at the level immediately below a program. The level immediately below the operating system (DOS) is defined by the registry, and there therefore exists such a list.

As per claim 12, 24, 36, and 48, BK0 may also come from the boot record, which is at the highest level, which may include a random element calculated during the bootup sequence (see column 15, lines 1-9).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,933,503 to Schell et al. discloses a modular system for cryptographically isolating modules.

U.S. Patent No. 6,175,924 to Arnold discloses for securing and authenticating applications.

U.S. Patent No. 6,651,171 to England et al. discloses a ringed system for selectively protecting code and data.

U.S. Patent Application Publication No. 2003/0196110 to Lampson et al. discloses protected software in a registry.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (703) 305-7727. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 4:00 PM Eastern Time. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MEH *MEH*

June 14, 2004

Gregory Morse
GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100